

Nova Scotia Gold Grain Study – Regional Gold Grain Concentrations in Till

T. A. Goodwin

During the 2007 field season, twenty-five 10 kg till samples were collected from within the following three main areas of the Province: (1) Cape Breton, (2) eastern Nova Scotia, and (3) southern Nova Scotia, as part of the ongoing Nova Scotia Gold Grain Study that commenced during the 2004 field season. The objective of the 2007 field program was to collect regional till samples from areas that have not previously been sampled in order to determine background concentrations of gold grains in 10 kg till samples.

The Nova Scotia Gold Grain Study till samples were collected during the North American Soil Geochemical Landscape Project (see Goodwin, 2007, this volume) in order to take advantage of field logistics, although both projects are completely separate research initiatives. Samples for the Nova Scotia Gold Grain Study were collected by shovel from shallow, hand-dug pits averaging approximately 90 cm in depth. A digital photograph of the sample pit and the general terrain of the sample site were taken for future reference. Detailed field notes including: sample depth, colour, texture and clast type and percentage were recorded for each site. Sample sites were georeferenced (NAD 83) by GPS to the Universal Transverse Mercator (UTM) grid.

All samples collected during the 2007 field season were sent to Overburden Drilling Management (ODM) Limited of Nepean, Ontario, for processing. ODM will process the 10 kg till samples and produce a heavy mineral concentrate, report the number of gold grains present and describe the morphology of each gold grain. The number of gold grains recovered in a sample, combined with the morphology of the grains recovered, can be used to determine proximity to the source of gold mineralization.

Results from the 2007 field season are pending. It is anticipated that results of the 2007 project, when combined with regional data previously reported from the 2004, 2005 and 2006 field seasons, will assist ongoing and future mineral exploration programs in the province.

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